

Three Faces of Apollo VII



MEN AT WORK—Like tourists, the crewmen of Apollo VII pointed the still camera at each other to show the people back home what it was like to spend almost 11 days in orbit in an Apollo spacecraft. In the left photo, Apollo VII commander Walter M. Schirra, Jr. gazes through his left-couch rendezvous window at an earth feature 120 miles below. At center,

command module pilot Donn F. Eisele takes time off from his duties at the spacecraft's navigation station to grin for the camera. Lunar module pilot Walter Cunningham, right, jots down notes on photos taken for the synoptic terrain and weather photographic experiments while a Hasselblad film magazine stays "parked" nearby in the zero-g of the cabin.

UCLA Prof to Head Lunar Science Institute

Dr. William W. Ruby, Professor of Geology and Geophysics at the University of California, Los Angeles, has been named Director of the Lunar Science Institute in Houston. Dr. Frederick Seitz, President of the National Academy of Sciences announced last week.

The Academy has accepted interim responsibility for operation of the Institute until a consortium of universities can be formed to take over its direction. The formation of the Lunar Science Institute was announced by President Lyndon B. Johnson in Houston, March 1, 1968. (See March 15, 1968 *Roundup*.)

The chief objective of the Institute is to provide a base for academic scientists participating in the lunar exploration program or who will be working in the Lunar Receiving Laboratory or using other facilities of MSC devoted to study of the Moon.

Lunar samples gathered by US astronauts will be brought first to the Lunar Receiving Laboratory. The Institute will also serve as a center for the analysis and study of lunar data obtained as a result of NASA's unmanned missions, such as Surveyor and Orbiter.

As director, Ruby will be responsible for the day-to-day scientific management of the Institute. A national board of governors, appointed by the President of the Academy as broadly representative of academic institutions interested in lunar science, will establish policy and review operations at stated meetings. All managerial responsibilities will be subcontracted to Rice University.

The Institute will eventually be established in the refurbished Jim West mansion adjoining Rice University property. Until these facilities are ready (in about a year), the Institute will occupy space in or near MSC. Present plans call for a staff of about six professionals (including the director and an administrative officer); adequate library, secretarial, and custodial staff; and office space to accommodate 10 to 12 visiting scientists as the program gets underway.

In making the announcement, Seitz said, "The appointment of Ruby, who has been a member of the Academy since 1945, is a significant starting point for what should certainly be an influential demonstration of university-government collaboration in the laboratory.

"The establishment of an academic facility as an adjunct to a unique government laboratory will benefit university researchers with unequalled opportunity."
(Continued on page 4)

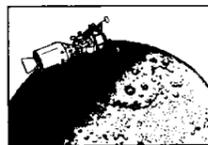
ROUNDUP

NASA MANNED SPACECRAFT CENTER

HOUSTON, TEXAS

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Management Ponders Options For Final Apollo VIII Profile

Apollo program officials and NASA management next week are expected to make a final decision on the flight profile for the Apollo VIII mission now

scheduled for December launch.

Apollo VIII is now planned as a manned earth orbital mission on a Saturn V launch vehicle, but the success of the Apollo VII

mission has prompted Apollo management to give serious consideration to three alternative mission options previously announced: an earth orbital mission deeper into space, a circum-lunar flyby, and a lunar orbit mission.

NASA Associate Administrator for Manned Space Flight George E. Mueller and Apollo Program Director Samuel C. Phillips earlier spelled out the steps that will lead to next week's decision:

- Detailed analysis and review of Apollo VII mission results to determine whether any major spacecraft changes are necessary.

- Final certification of solutions to the problems encountered during the Apollo VI unmanned flight last spring. Modifications included strengthening of fuel lines in the second and third stages and elimination of objectionable oscillations or "pogo" in the Saturn V first stage.

- Complete structural, pressure and insulation ground tests before the Apollo VIII command and service modules are certified ready for lunar flight.

- Checkout flight computer programs for deep space and lunar mission targeting; establish the operational trajectory; and deliver and verify computer programs to Kennedy Space Center.

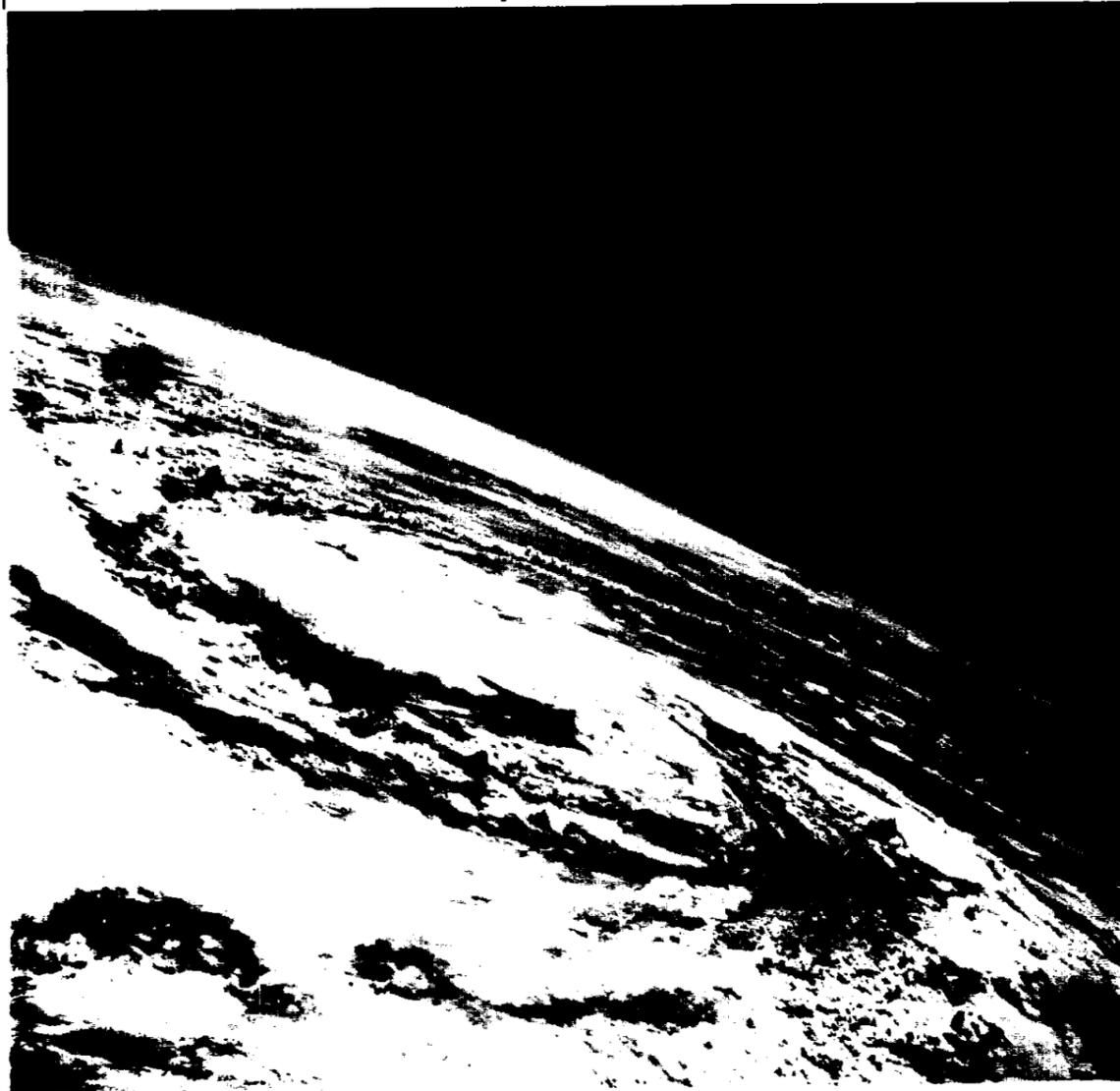
- Mission Control Center command and service module flight simulations, tests with mechanical models, and delivery of Apollo VIII command module computer program.

- Complete design certification reviews of launch vehicle and spacecraft subsystems.

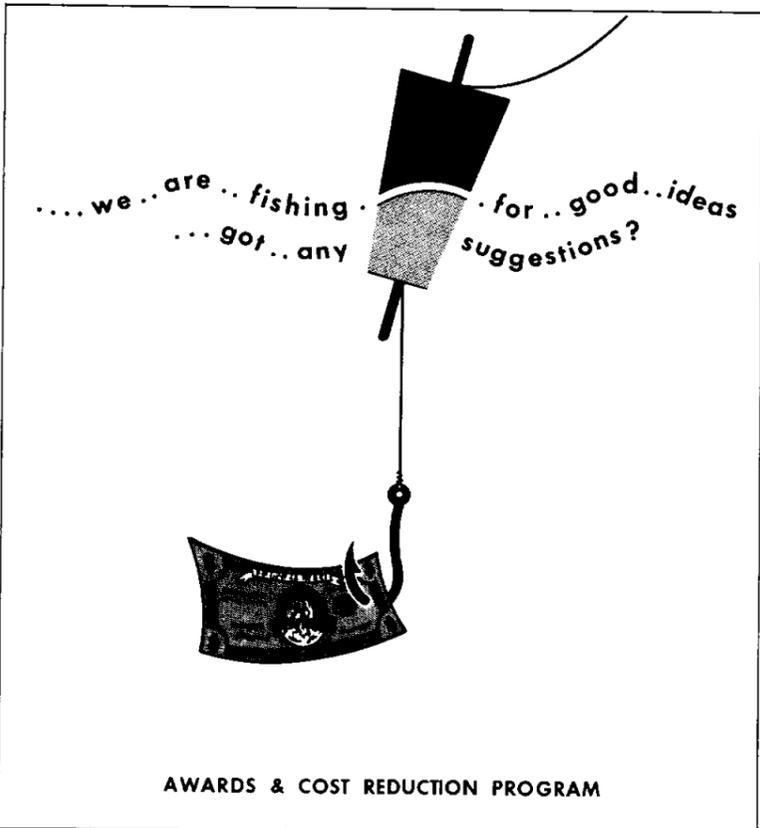
"The final decision on whether to send Apollo VIII around the

(Continued on page 4)

Gladys' Pirouette



HURRICANE VORTEX—About two minutes after the crew of Apollo VII shot the photo of the Houston-Galveston area shown on page 4 of this issue, they aimed their camera toward hurricane Gladys churning northward in the Gulf of Mexico about 150 miles southwest of Tampa, Fla. The view is toward the southeast with Cuba in the background just below the horizon. Gladys had winds up to 80 knots when this photo was taken.



Speed Receives W. S. Connor A&M Award

Fred M. Speed of MSC Computation and Analysis Division Data Systems Development Branch has been named recipient of Texas A&M University's Institute of Statistics W. S. Connor Award. Speed is a statistician working on his PhD at Texas A&M.

The award, named for the late Dr. W. S. Connor of the Texas A&M faculty, is presented annually to the institute's outstanding PhD candidate who completed his qualifying examinations the previous academic year.

Speed was one of 12 candidates in the running for the award. He is a Corpus Christi native and received his BS and MS degrees in mathematics from St. Mary's College in San Antonio.

THE ASTRONUTS

(filched from TRW Systems Group)



Credit Union Outlines Types of Membership

The MSC Federal Credit Union has announced that it will be closed Friday, November 29, Monday, December 2 and Tuesday, December 3. No business will be conducted on these days, but payments on loans mailed to the Credit Union will be credited on the same day received.

The pros and cons of Credit

Union joint ownership and joint membership are pointed out by the MSC Credit Union in definitions of the three different types of accounts in the average credit union:

- Individual Account — An individual account has the benefit of complete private ownership, however the drawback is that it can be used by the member only, and in the event of his death, the credit union has the problem of distributing shares and any insurance proceeds to the rightful heirs.

- Joint Ownership Account — This type of account offers certain advantages to the owners, such as the right to make share deposits and any insurance proceeds may be passed on directly to the joint owner or owners without delay. The chief disadvantage of this type of account is the account must be closed at the end of the dividend period in which the member's death occurs. The reason for this is that the member's death removes the joint owner from the field of membership. Another disadvantage is the joint owner cannot make application for a loan.

- Joint Membership Account — This is the most desirable type of account and its major advantages are (a) all members have identical rights and privileges, (b) the account may be continued after the death of the other member, (c) should the surviving member desire, he could, without inconvenience or delay, draw any or all the shares.

To open an individual account, the member must pay the entry fee and be within the field of membership.

The Joint Ownership Account requires only one person be within the field of membership. The person joining the credit union pays the entry fee and has the right to name anyone joint owner.

The Joint Membership Account requires both parties to the account be within the field of membership. Each one must pay the entry fee required.

Co-op of Month



SIGNIFICANT CONTRIBUTOR — Marshall A. Heath of Information Systems Division Data Systems Development Branch has "exhibited extreme dedication and competence" in his work in the checkout of Apollo television scan conversion equipment and in development of color-televized medical microscopy system for the Lunar Receiving Laboratory.

Agreement Renewal



CONTINUED USE—A new support agreement between MSC and the USAF Reserve for the continued use by MSC of Ellington AFB was recently signed by MSC Deputy Director George S. Trimble and USAF Reserve commander Maj. Gen. Rollin B. Moore. MSC has received support at Ellington AFB since late in 1961, and the new agreement has been updated to include changes in MSC requirements for Ellington facilities. Observing the agreement signing are, standing left to right, MSC Interagency Affairs Officer A. A. Verrengia, MSC Associate Director Wesley L. Hjernevik and Ellington AFB commander Col. J. S. Coward.

The Roundup is an official publication of the National Aeronautics and Space Administration Manned Spacecraft Center, Houston, Texas, and is published every other Friday by the Public Affairs Office for MSC employees.

Director Dr. Robert R. Gilruth
Public Affairs Officer Paul Haney
Editor Terry White
Staff Photographer A. "Pat" Patnesky

Your Job in Focus

NASA Travel Accident Insurance

The NASA Travel Accident Insurance was recently renewed for enrolled employees. All NASA employees are eligible for Travel Accident Insurance even though they are not enrolled in the regular Group Life Insurance Program. Also, enrollments are accepted at any time during the year. Additional information and enrollment cards may be obtained from Terry Rasberry, extension 7233.

Equal Opportunity Policy

It is a well-established policy of the Federal Government, and of NASA, to secure equal treatment and equal opportunity for all persons, regardless of race, creed, color, national origin, politics, marital status, physical handicap, or sex.

Any Federal employee or qualified applicant who believes he has been discriminated against may forward a written signed complaint to the Deputy Equal Employment Opportunity Officer, Wesley L. Hjernevik. Procedures for filing complaints of discrimination are contained in MSCM 3000, "Personnel Manual."

Appeals and Grievances

There are several published procedures through which employees may appeal certain personnel actions, air complaints, and solve problems. Adverse actions involving discharge, suspension for more than 30 days, furlough without pay, and reduction in rank or compensation may be appealed through the NASA Appeals System. Complaints and/or grievances involving job duties, working conditions, or relationships may be processed through the MSC Grievance Procedure. Classifi-

cation of an employee's position may also be appealed through the Position Classification Procedure.

The applicable procedures are located in MSCM 3000, "Personnel Manual." Additional information concerning these procedures should be requested from the appropriate supervisor. If the supervisor cannot satisfy the information needed, the Personnel Management Specialist servicing the element concerned should be consulted.

Roundup Swap-Shop

(Deadline for Swap-Shop classified ads is the Friday preceding Roundup publication date. Ads received after the deadline will be run in the next following issue. Ads are limited to MSC civil service employees and assigned military personnel. Maximum length is 20 words, including name, office code and home telephone number. Send ads in writing to Roundup Editor, AP3. Ads will not be repeated unless requested.)

FOR SALE/RENT—REAL ESTATE

Colonial 1½-story, 2 bath, 4-bedroom, central air, carpet, brick, 2100-sq ft, 2-car garage. \$23,000. H. M. Starnes, Dickinson 535-5397 after 5.

Fairmont Park, 4-2-2, family and living rooms, carpeted, drapes, fenced, oversized lot. \$22,500—equity, assume 61 loan. R. Kubicki, 471-3174.

3-2-2 brick, Hitchcock, paneled and brick den. LR, large wooded yard, central A/heat. Equity, assume \$10,500 4¾% G.I. A. Cook, 986-7842.

Rent: Clear Lake Townhouse, 2 bedrooms, 1½ bath, builtins, carpets, patio, ½ block from Rec Center. Carol Childs, Dickinson 534-5944.

Will trade equity in acreage for car/boat. Free hunting in 10,000 adjacent acres. \$20/ mo payoff. Nickerson, 645-0372.

FOR SALE—AUTOS

Merlyn Mk IV, C sports racing class, tube chassis, Hewland 5-speed transaxle, Holbay 109E Ford drv sump engine, spares, trailer. J. Hirasaki, 591-3779.

64 Mercedes-Benz 230 SL Coupe, excellent condition. Power steering, air, AM/FM, all leather interior, \$3400 (firm). Ron Carr, X3701.

64 Ford Falcon Futura V-8 4-door hard-top, radio and air, good looking. \$200 under retail. Only \$745. Matelski, 944-1280 after 5.

68 Pontiac Le Mans, automatic, air, power brakes, rally-2 wheels, many extras. Penny Cooke, 427-3996.

TR4, 64, new upholstery, rugs, paint, runs perfect, low mileage, \$1095. C. Hooper, 877-1328.

63 Rambler 660 Classic, 4-door, straight 6-standard shift (22 mi to gallon), reclining seats, makes into bed. \$460. \$100 under retail. Barbara Matelski, 944-1280 (after 5).

61 Comet, 4-door, standard transmission, radio, good tires, runs fine. Good work car, \$200. Steve Wallin, HU 5-3853.

68 Corvette with removable hardtop, V-8, 327, hydramatic, air, power, AM/FM, positraction, disc brakes, 3,000 miles. Clean, like new. McCollum, HU 7-2047.

67 Ford Galaxie 500 390/V4, 2 dr hard-top, radio, air, pwr, WSW, lime green/white, vinyl top, \$1950. Taylor, HU 2-1678.

64 VW sedan, A-1 mechanical condition, new motor, air conditioned, immaculate. R. E. Lewis, HO 2-2419.

66 VW, excellent condition, 34,000 miles, one owner, radio, whitewalls, white with red leatherette interior. \$1095. Barr, MI 9-1751.

68 TR250 Triumph sports car, like new with only 1,000 miles. \$3095. Siler, 591-2787.

67 Ford Ranger pick-up, custom inside and out, standard, slant 6, radio and heater. Very clean. 34,000 miles. \$1500. Williams, 944-1524.

63 Oldsmobile "98", 4-door, air, all power. New muffler, pipes and shocks. Perfect condition \$1100. B. Darby, 488-1581.

63 Cadillac, 4-door, air, power windows, seats, etc., electronic headlight dimmer, new tires and exhaust system. Just like new. \$1450. B. Darby, 488-1581.

63 Mercury, good motor and tires, 2 door hard-top. \$125. Maujarie Brennan, 932-5287.

66 Mercury Colony Park 9-passenger station wagon, all extras, good condition, \$1800. Hal Hunt, 877-1377.

66 Oldsmobile Delta 88 4-door, power, air, new tires, low mileage. 66 Chevy pickup, air, camper, radio. Velna Traxlar, 945-2278.

Immaculate 1966 Pontiac Starchief executive, all power, automatic, air, outstanding value at below book price. Bob Brock, 932-4006.

66 Pontiac "GTO", xcldnt condition, black vinyl top, air, reverb, power antennae, new tires, seats, transmission. \$1750. Nickerson, 645-0372.

66 Pontiac GTO, 389 V-8, 4-speed, air; red with white interior, excellent condition. Paul Joyce, 932-5165, League City.

FOR SALE—MISCELLANEOUS

Bedroom suite: 2 pc, \$25. 3 pc, \$35. Two vinyl chairs, \$10 each, both for \$15. J. Sutton, 932-3979.

Large heavy couch and matching chair, need covers, \$50. Mike Bledsoe, 471-2600. HO model trains: new diesel engines, \$5. Freight cars, \$1. HO sets with power, \$20. M. J. Bledsoe, 471-2600.

LS-16 sailboat, galvanized trailer, 3½-hp outboard, many extras, all xcldnt condition. Ed Simon, 488-4043.

Rent my Cessna Commuter or Skyhawk, aircraft maintained to highest standards, modes rates. Neel Tilton, GR 9-1176.

GE electric range, 2 ovens (1 window), 4 top heater elements, timer, cost \$269-sell \$95, xcldnt condition. Kelly, HU 8-0511.

Service station-type bumper jack. 1½ ton—Walker-J-500—has Saginaw recirculating

ball screw nut—works fine, \$14. A. S. Giralda, WA 1-7212.

Starfish sailboat, 14 ft., with Comet trailer, 1967 model, good condition, new \$525, asking \$320. Rudy Trembl, HU 3-2225 (no home phone).

Knight 70-watt solid-state stereo amplifier, walnut case, absolutely perfect condition, cost \$120. Sell \$70. L. Brown, 591-2668.

Walnut coffee table, modern, excellent condition; \$20. High, 591-3254.

4 bar stools. White leather, wrought iron legs. \$15. Off-white fully-lined patio drape, left-hand rod. \$15. Evelyn Huvar, 483-7626 (no home phone).

Appointment only. Alterations, dressmaking and tailoring. Evelyn Huvar, 483-7626 (no home phone).

Sofa, two chairs, ottoman, contemporary, chairs-blue-green; sofa-basic blue. Walnut-finished legs, looseback pillow, good condition. B. G. Smith, 591-3069.

2 Midland walkie-talkies, 2 channels, same as new. \$37.50 ea. retail, \$50 for both with crystals. Eaton, HU 2-7047.

Power lawn mower, \$5. Barbeque, \$3. C. Hooper, 877-1328.

Bedroom set, double bed, headboard, large dresser with mirror, chest drawers, nightstand, chair—dark walnut, Spanish. Bill Peters, HU 3-4576 (no home phone).

Free, 2 black male kittens. C. E. Whitsett, 488-1337.

Ironite automatic ironer, includes stand and chair, \$35. H. M. Biggs, GR 1-2745.

Burmese/Siamese cross-kittens, \$15. H. M. Biggs, GR 1-2745.

48BL carb manifold for any 301, 318 C. I. Dodge, Plymouth, Chrysler engine. J. Whiteley, 946-3804.

AKC, prize-winning Basset Hound at stud. Tri-color. Pick of litter. Bob Law, 944-7596.

Motorola TV, 23-inch screen, black and white—in good shape. \$75. Charlotte Maltese, X2321 (no home phone).

Magnavox stereo, console—needs minor repairs. \$50. Charlotte Maltese, X2321 (no home phone).

Early American wing-back sofa solid-foam zippered cushions and back, neutral print, good condition, over \$200 new, \$35. W. C. Muhly, GR 1-3762.

Pirelli radial-ply tires, size 225-HR-14, used 3560 miles, traded cars. \$45 each. R. L. Young, 932-5102.

G.E. 220-V range/oven, four burner, clock timer, white, like new. \$75. R. L. Young, 932-5102.

G.E. 19,600 BTU air conditioner, 220-V, 3 yrs. old. \$125. R. L. Young, 932-5102.

Dextra surfboard, 22 in. x 9 ft. 8 in., \$40. W. C. Muhly, GR 1-3762.

66 Honda 305 C. C. Super Hawke, excellent, extras. 5500 miles. Adult owner. Craig, 877-2145 weekends or 228-9991, Landing Apt. 278.

Chrome/yellow formica dinette with four chairs, \$25. Small turquoise platform rocker, \$10. B. Niemeyer, 946-6870.

Blue Lady Schick table-top hair dryer. Originally \$39.95; like new \$20. Peggy Carlisle, 932-2836 after 5.

Baby bed, mattress, \$15, high chair \$3, port-a-crib \$5, baby scales \$2, stroller \$5. All good condition. Heil, 944-5947.

12 ft. aluminum Jon boat and 3½-hp Sears motor, 3 years old, \$95. Will sell separately. Leonard, 944-4997.

Mahogany secretary, excellent condition, \$65. McGregor, 932-5242.

Baby sitting for moderate price, preferably children age 3 or older. Transportation needed to and from Seabrook. Denson, 474-3647.

35-watt hi-fi stereo with AM-FM radio and 4 speed record changer. Mahogany finish \$95. Tom Ross, GR 4-2041.

21-inch B&W Olympic TV console with AM radio and 3-speed record changer, \$75. Tom Ross, GR 4-2041.

Portable size 18-inch B&W Motorola TV with roll-about stand. Needs repair, \$35. Tom Ross, GR 4-2041.

Weimaraner puppies 6 weeks old, available November 15, pure bred. El Lago. W. Jaderlund, 877-4900.

Dining table, 6 chairs, Heywood Wakefield; brown sectional couch; 6' x 9' orange-tone Acrilan rug. W. Jaderlund, 877-4900.

15' fiberglass, 40-hp electric, trailer, \$375. 60 Chry Imperial \$375. Guitar amp \$75. Tape recorder \$150. Peters, 534-5661.

Free kittens, Barker, HU 8-2177. Six Lhasa Apso puppies from imported stock. Calm, gentle children's pet. Wormed. Paper trained, \$125. Jim Bodmer, 932-481, League City.

WANTED

Car Pool to NASA: leave from Bellaire area (Holt St.). Working hours 8:00-4:30. Carr, ext. 3701.

Office-size man's desk, preferably with central locking mechanism and modern styling. C. E. Whitsett, 488-1337.

Baby Port-a-Crib with or without pad. Must be in good condition. Jo Sapp, 946-8376 after 5.

Would like either to join a carpool or have a rider from Winkler area, 8-4:30, Marilyn Garzon, MI 3-7237.

Radio receiver: general coverage to 30 MHz. Hammarlund, hallicrafters, National, etc. P. H. Kloetzer, 877-3365.

Would like single girl to share two-bedroom apartment with same in Gulfgate area. Phyllis Swinford, HU 3-4541. (no home phone).

Wanted—a fifth member for car pool from Gulfgate to MSC, 8 to 4:30, Jonny Ferguson, 747-0403.

12-gauge shotgun, single shot, 36-inch barrel. Fletcher, X6205 (no home phone).

FOUND

Charm bracelet in parking lot west of Bldg. 45. Owner must identify to claim. Kathy Spencer, 4717.

1 child's watch (Sears) with a black leather band was turned in to the Information Booth at the MSC Picnic. Charlotte Maltese, Bldg. 4, Room 314, MSC X2321.

LRL Finishes 10-Day Dry-Run

A 10-day simulation of the MSC Lunar Receiving Laboratory Sample Operations area last week was completed successfully.

Most of the simulation tests were those scheduled to be done within the LRL following a lunar landing mission. The procedures for handling lunar samples in the Sample Operations area were conducted by NASA scientists and outside-agency principal investigators who will aid in preliminary examination of lunar samples.

The simulation was carried out in the vacuum system, rare gas analysis system, physical-chemical test area and the radiation counting laboratory. A partial simulation of the biological preparation area procedures was also conducted.

A full-scale simulation of the entire LRL, including the Crew Reception Area, is tentatively scheduled for early 1969.

Country Theater Opens 3-Play Winter Season

Clear Creek Country Theater winter season tickets for the Theater's three productions are now on sale in a subscription campaign in the Clear Lake-Galveston County mainland areas, according to chairman Jack McGurr.

The \$10 season ticket pays for two tickets to each of the three plays, while the individual boxoffice price for each play is \$2.50.

Season productions will be "A Thousand Clowns," directed by David McCormick, opening November 15; "Teahouse of the August Moon," directed by Morgan Redmond in February; and "The Crucible," directed by Jo Simmons in April.

Persons not receiving the earlier season ticket mail solicitation may contact McGurr at Clear Creek Country Theater, League City 932-3714 in the evenings, or Carolyn Detmore at MSC extension 5491.

EAA Sells Tickets To Shrine Circus

The MSC Employee Activities Association has reserved 500 tickets for the November 16 performance of the Arabia Temple Shrine Circus. The performance will be at 10 am in the Coliseum.

MSC and contractor employees may buy tickets at \$1.50 each at the Bldg 3 cafeteria and from the following persons/Bldg/Ext: Martha Caballero, 4/2421; Dennis Doherty, 4/3005; Edi Quinn, 4/5558; Sharon Henderson, 2/2548; Wanda Slack, 45/3937; Sharon Brennan, 2/5891; Raymond Donatto or Fred Rowell, 10/4720; Ed Crawford, 10/4711; Cookie Underwood, EAFB 212/7267; and Suzanne Golden, 30/5126.

Ticket sales will end November 13.

AFGE Hears Chaney

MSC Labor Relations Officer Bailey R. Chaney November 12 will speak on "Solving Labor-Management Problems in Construction and Service Contracts" before the monthly meeting of Lodge 2284 of the American Federation of Government Employees.

The meeting, slipped one day because of November 11 Veterans Day holiday, will be at 5 pm in the Bldg 30 auditorium.

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Harry Rowe Kay Chapman
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Judo Club Holds Fall Courses

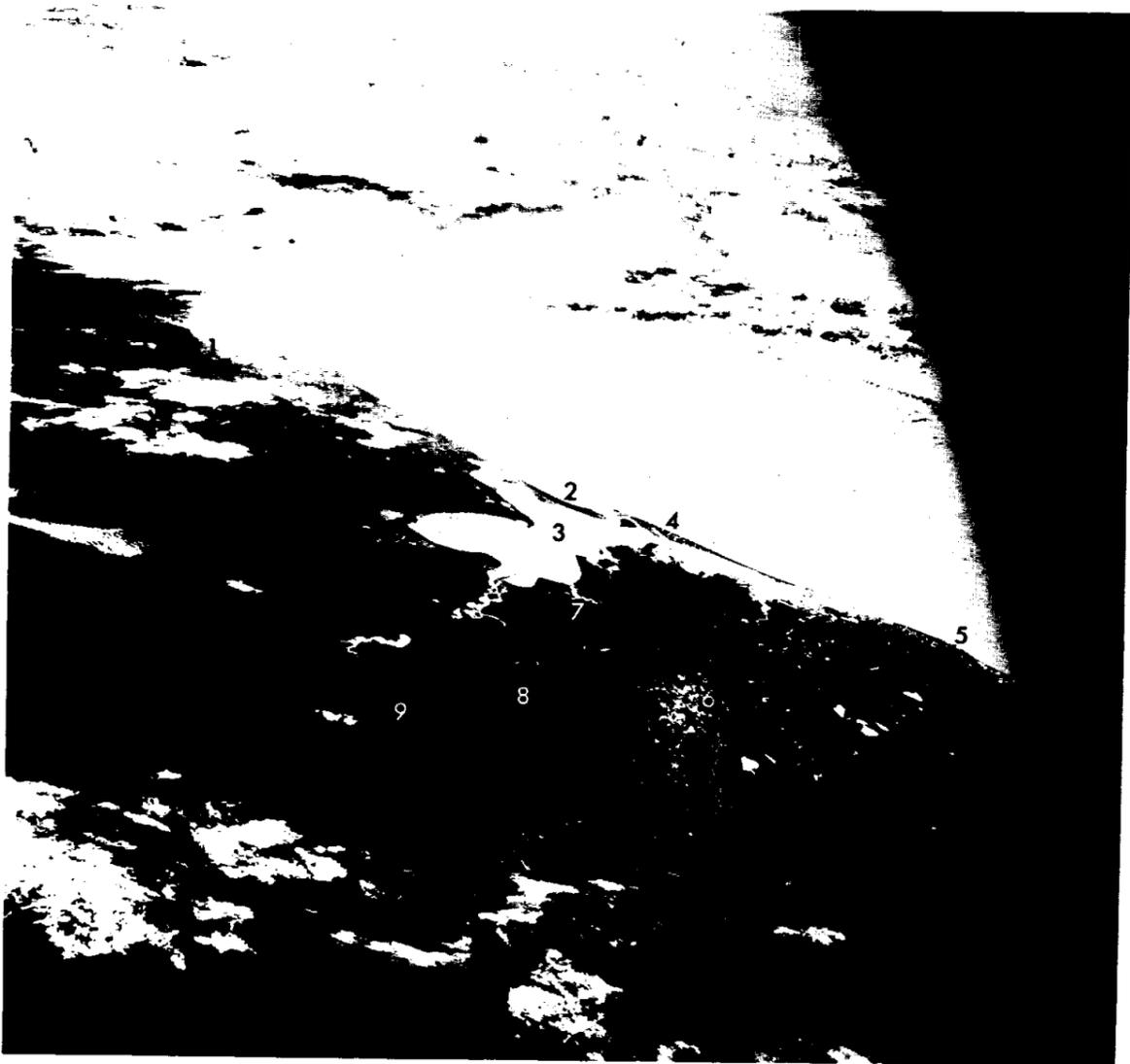
The NASA Judo Club this fall is offering courses in children's sport judo, men's judo and self defense, and will start a class in women's self defense as soon as enough women register.

Classes are held each Thursday from 6 to 9 pm in the Harris County Park building on NASA Road 1 on the north shore of Clear Lake. Tuition fees go to replace club equipment, and additional donations to the equipment fund will be appreciated.

For Judo Club information, call Dutch von Ehrenfried at 4667 or Dale Moore at 4501.

SIGN UP FOR U.S. SAVINGS BONDS/FREEDOM SHARES

On a Clear Day You Can See Houston



BAGHDAD ON THE BAYOU—The southeast Texas Gulf Coast from Lake Sabine to Freeport is free of clouds in this photo made from Apollo VII during the ninety-first revolution at 144 hours 25 minutes after liftoff. Features visible are: 1—Sabine Lake, Beaumont-Port Arthur; 2—Bolivar Peninsula; 3—Galveston Bay; 4—Galveston Island; 5—Freeport, mouth of Brazos river; 6—glint of sun on rice fields east of Brazos near Alvin; 7—MSC; 8—downtown Houston; and 9—Houston Intercontinental Airport under construction. Cumulonimbus clouds offshore in the Gulf jut upward like asparagus shoots.

Apollo VII Crew Receives Exceptional Service Medals

Apollo VII crewmen Walter M. Schirra, Jr., Donn F. Eisele and Walter Cunningham Saturday received NASA Exceptional Service Medals in a ceremony at President Lyndon B. Johnson's LBJ Ranch. Schirra's award was a cluster to the Exceptional Service Medal earned for his part in the world's first space rendezvous in Gemini VII/VI.

President Johnson, in opening remarks for the award ceremony, said, "For nearly 11 days, much longer than is required to go to the moon and back, you operated this complex new spacecraft without a failure in any major system. In short, you proved beyond doubt that you were flying the world's most advanced and most versatile manned space vehicle, and I want to pay tribute here, too, to a private enterprise system and the industry that made that possible, as well as the scientists that provided that great leadership. You proved that the United States today leads in space accomplishments."

NASA Acting Administrator Thomas O. Paine read the citations as the medals were presented to the Apollo VII crew.

Retiring NASA Administrator James E. Webb, in a surprise adjunct to the awards ceremony,

was awarded the NASA Distinguished Service Medal by the President.

Lunar Science
(Continued from Page 1)

opportunities to explore another celestial body. The collaboration will benefit the laboratory staff by providing opportunities for direct, personal access to the best academic science. Science and the nation will benefit by enhanced communication between the two groups. I speak as well for our Committee on NASA-University Relations, whose ideas are now being given substance, when I express my great delight that Ruby has been persuaded to accept this post."

Ruby went to UCLA after 38 years with the U. S. Geological Survey. He also served as Chairman of the Division of Geology and Geography of the National Research Council, 1943-46, as well as Chairman of the NRC, 1951-54. He has twice been elected to the Council of the Academy for three-year terms, in 1951 and 1965. He was a member of the National Science Board from 1960 to 1966. The President of the United States awarded him the National Medal of Science in 1965. During his tenure as Director of the Lunar Science Institute, he will also serve as adjunct Professor of Geology at Rice.

NASA Seeks Resupply Craft Study Proposals

More than 30 aerospace firms have been requested to submit proposals to NASA for a conceptual design study for a safe and economical two-way transportation system to ferry men and cargo to and from earth orbiting space stations after 1974.

Proposal deadline is November 29, and are to include conceptual design, development, manufacturing, testing and operations requirements for logistics space vehicle systems to support earth orbital programs in the post-1974 time period. A new launch vehicle and spacecraft system will be identified in the study, due for completion within eight months.

The proposal request is a joint effort of MSC and the NASA Marshall Space Flight Center. Two parallel study efforts by separate contractors will be run under the same tasks and ground rules, with one contract to be awarded by MSC and one by MSFC.

The study will emphasize a space station logistics mission in a 100x300 nm orbit. The system's payload range will be from 5000 to 50,000 pounds and shall accommodate up to 12 people in addition to significant cargo return inside a reusable vehicle.

'BIG G'—

Gemini Under Study As Logistics Shuttle

MSC has awarded a \$436,000 study contract to the McDonnell Douglas Corporation, St. Louis, Missouri for preliminary investigation of a modified Gemini system to perform low earth orbital logistic missions in support of proposed space station activities.

The fixed price contract calls for completion of the study effort by July 1, 1969.

The investigation will include preliminary design definition and system analysis of a low cost

modified Gemini spacecraft capable of carrying a nominal crew of nine. It will also consider cargo and propulsive requirements as well as land landing and water landing and identify design features required to make the spacecraft reusable and refurbishable.

The structural design of the logistic spacecraft is to be compatible with the Saturn launch vehicle S-IVB stage and with the Tital IIIM. It is to encompass as many developed subsystems and as much current technology as practical, including hardware developed for the Gemini, Apollo, Apollo Applications and Manned Orbiting Laboratory programs. And it is to consist of three basic modules, a Launch Escape System (LES), a Crew Module (CM) and a Cargo-P propulsion Module (CPM).

The study contract will identify the necessary development costs, funding, schedules, facilities and facility modifications for use by NASA management in planning future activities. The study will not define the use or implementation of a logistic spacecraft.

Apollo VIII Profile

(Continued from Page 1)

moon will be made after a thorough assessment of the total risks involved and the total gains to be realized in this next step toward a manned lunar landing," said acting NASA Administrator Thomas O. Paine. "We will fly the most advanced mission for which we are fully prepared that does not unduly risk the safety of the crew."

The Apollo VIII prime crew is commander Frank Borman, command module pilot James A. Lovell, Jr. and lunar module pilot William A. Anders.

... and a good time was had



THE LU-WOW SCENE—Galveston County Park in League City was a swinging place October 19 as MSC employees descended upon it for the annual picnic—this year with a Hawaiian flavor. The roving photographer captured some of this flavor with these six representative photos. 1—It's anybody's guess as to who is on which team in this touch football game. 2—A demonstration of the gentle art of Karate. 3—The hula-hoop isn't extinct after all. 4—One of the delights of childhood—cotton candy. 5—Lu-Wow Queen Karen Harmon accepts her newly-won crown with some prompting from Hilo Hattie, alias Helen Ragsdale. Queen candidates arrived by boat and then were escorted to the Park hall for the finals. 6—A Park gully is explored by some of the small fry. (Photos by Jack Jacob/PTL).